Initiation Package for Endangered Species Act Consultation

Mapes Project

Beckwourth Ranger District, Plumas National Forest

I. INTRODUCTION

The purpose of this initiation package is to review the proposed Mapes Project on the Beckwourth Ranger District of Plumas National Forest in sufficient detail to determine to what extent the proposed action may affect any of the threatened, endangered, proposed, or sensitive species and designated or proposed critical habitats listed below. In addition, the following information is provided to comply with statutory requirements to use the best scientific and commercial information available when assessing the risks posed to listed and/or proposed species and designated and/or proposed critical habitat by proposed federal actions. This initiation package is prepared in accordance with legal requirements set forth under regulations implementing Section 7 of the Endangered Species Act (50 CFR 402; 16 U.S.C. 1536 (c)).

Threatened, Endangered, Proposed Threatened or Proposed Endangered Species

The following listed and proposed species may be affected by the proposed action:

Sierra Nevada Yellow-legged Frog (*Rana sierrae*), **E**

Critical Habitat

The Mapes Project does not overlap any designated critical habitat.

Species not included in consultation package:

The Mapes Project was entered into the IPAC website on September 15, 2020. Three species included on the species lists obtained from U.S. Fish and Wildlife Service (USFWS) and the National Oceanic Atmospheric Administration National Marine Fisheries Service were eliminated from analysis due to lack of species distribution, suitable habitat, and lack of designated critical habitat. These species are listed below:

Yellow-billed Cuckoo (*Coccyzus americanus*), **T**

Delta smelt (*Hypomesus transpacificus*), **E**

Carson Wandering Skipper (*Pseudocopaeodes eunus obscurus*), **E**

II. CONSULTATION TO DATE

The Forest Service has not previously consulted with Fish and Wildlife Service on this project.

III. DESCRIPTION OF THE PROPOSED ACTION

Background

The Mapes Project is designed to improve forest health, wildlife habitat, and forest resilience at the landscape level. The project design incorporates concepts presented in An Ecosystem Management Strategy for Sierran Mixed Conifer Forests (PSW-GTR-220, North et al. 2009) which emphasizes the importance of increasing forest heterogeneity at both the stand level and landscape level. This strategy creates a mosaic of forest densities and structures by mimicking forest conditions created by the fire frequency and intensity associated with differences in slope position, aspect, and slope steepness.

Historically the Mapes Project area supported frequent, low to moderate severity, "fuel-limited" fires (Miller and Safford 2017) that had major impacts on ecosystem processes, forest composition and structure. This fire regime created a heterogeneous forest structure that favored primarily fire-tolerant species, low tree densities, large tree sizes, and a variety of understory conditions. Past management practices, including a century of fire suppression, have led to a decrease in average tree size, an increase in canopy cover, a loss of fine-scale canopy gaps, increases in woody debris and litter, and an increase in surface fuel volume and continuity (Safford and Stevens 2017).

In 2019 the Walker fire burned through 25,976 acres of the Mapes Project Area. Much of the area burned at high severity, however there is still a need to treat portions that burned at low to moderate severity.

Project Location

The Project Area is 86,422 acres and is defined as the area used for planning in which all project-related activities will occur. The Action Area is 113,260 acres and is defined as all areas proposed for treatment and all adjacent areas potentially impacted by proposed activities, and was delineated as a 0.5 mile buffer around the Project Area to include possible downstream effects of the project activities (Figure 1). The southern end of the project area is located along the Forest Service system boundary approximately 5 miles north of Portola. The project area extends north along the east side of Lake Davis to approximately 2 miles south of Antelope Lake. The east side of the project area generally parallels County Road 177. The project area is primarily located in the Red Clover Creek and Last Chance Creek watersheds with a smaller portion in the Middle Fork Feather River watershed. Very small portions of the project area are located in the Upper Indian Creek and Sierra Valley watersheds. Elevation ranges between 5,200-7,500 feet, and dominant vegetation types include eastside pine stands and Sierran mixed conifer stands intermixed with aspen, sagebrush steppe, and meadows. The project area is 86,422 acres and includes all or parts of Township (T) 23 North (N), Range (R) 13 East (E), Sections 1-3; T23N, R14E, Sections 3-6, 8-11 and 16; T24N, R13E, Sections 2-6, 8-11, 13-17, 21-27, 35 and 36; T24N, R14E, Sections 4-6, 8, 9, 16-21 and 28-33; T25N, R12E, Sections 1, 2, 12, 13, 24, 25 and 36; T25N, R13E, Sections 1-36; T25N, R14E, Sections 1-11, 14-23 and 27-34; T26N, R12E, Sections 1, 11-14, 23-27 and 34-36; T26N, R13E, Sections 3, 5-10 and 12-36; T26N, R14E, Sections 7, 15-22 and 26-35; T27N, R13E, Sections 31 and 32; Plumas County, California, Mount Diablo Base Meridian.

Project Activities

The Beckwourth District of the Plumas National Forest proposes vegetation management activities to meet fuels and timber stand improvement objectives, improve wildlife habitat by reducing conifer encroachment in aspen stands, meadow habitat, and around special aquatic features, and improve watershed condition by reducing transportation system impacts.

The treatment area is approximately 44,717 acres, comprised of: 39,255 acres of mechanical vegetation treatments and 1,469 acres of hand thinning treatments all with follow-up under-burning, 3,994 acres of prescribed fire only treatments, 42 miles of planned road decommissioning, and additional system road improvements. The project is expected to be implemented 2021-2033, depending on burn conditions.

The Proposed Action consists of the following actions on identified National Forest System (NFS) lands:

- Mechanical thinning (Variable Density Thin) of trees up to 29.9 inches DBH for fuels reduction and timber stand improvement.
- Mechanical fuels treatments (mastication, grapple piling) as primary and secondary treatments.
- Thinning for wildlife habitat improvement (combination of hand thinning and mechanical thinning).
- Prescribed fire as primary and secondary treatments for fuels reduction, wildlife habitat improvement, and to reintroduce fire as an ecosystem process.
- System road improvements and non-system road decommissioning to reduce transportation system effects on watershed resources.

Table 1. Summary of Proposed Vegetation Treatments

Action	Acres
Mechanical thinning with follow-up underburning	29,250
Mechanical fuels reduction with follow-up underburning	10,006
Hand thinning with follow-up underburning	1,469
Underburn Only	3,994
Grand Total	44,717

Note: Acres may vary slightly during the final layout due to topography, stand condition, etc. Individual treatment acres may not add up to the total due to rounding.

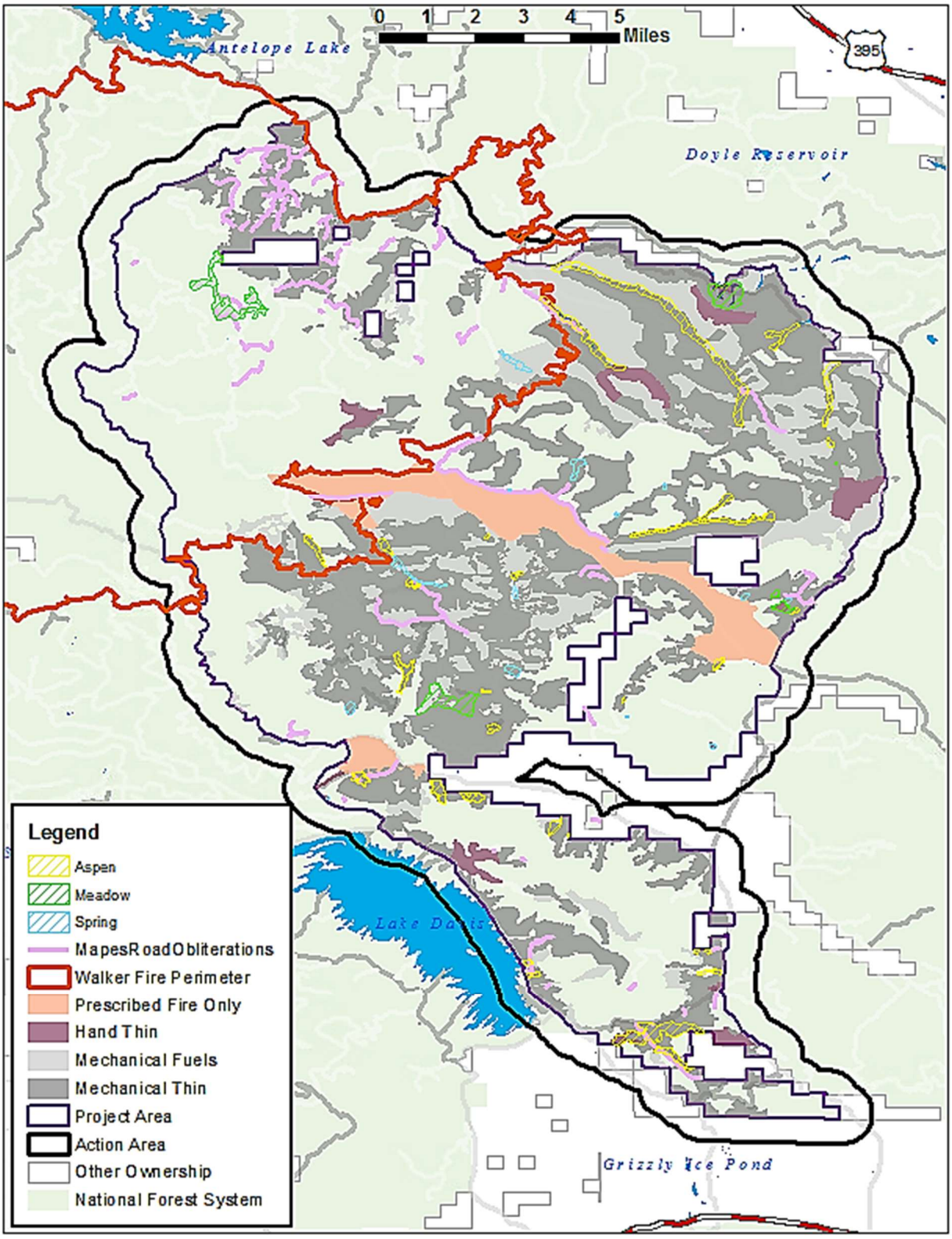

Figure 1. Mapes Action Area and treatment units.

Vegetation Treatments

Mechanical Thinning (29,250 acres)

Mechanical thinning and post treatment underburning will occur on approximately 29,250 acres. Thinning will target general forest timber stands that are overstocked, have poor regeneration, have high fuel loading, and/or are displaying signs of disease, as well as aspen stands and meadow edges that are being encroached by conifers. Thinning treatments would utilize variable density thinning to increase timber stand and landscape-level heterogeneity. Merchantable timber greater than 11 inches diameter at breast height (DBH) but not greater than 30 inches DBH and sub merchantable trees between 3 inches DBH and 11 inches DBH would be targeted for removal. All treated units will be considered for follow-up underburning to reduce duff and ground fuel levels as well as reintroduce fire into the forest ecosystem.

Mechanical equipment used for thinning may include tracked or wheeled feller-bunchers and skidders. Equipment would generally be restricted to slopes of 35 percent or less. Equipment would work on short pitches of slopes up to 45 percent outside of Riparian Conservation Areas. To the extent possible, existing skid trails and landings would be utilized to minimize new disturbance within the project area. Skid trails, designated stream crossings, landings, and temporary roads created to support mechanical thinning would be restored after implementation. Restoration may include one or more of the following: subsoiling or scarifying compacted surfaces, recontouring, installing drainage features like water bars, seeding and/or mulching with available material such as available slash to improve infiltration and minimize erosion.

Mechanical Fuels Treatments (10,006 acres)

Mechanical fuel treatments will remove small trees, shrubs, and dead and down material. These treatments could be utilized as both a stand-alone treatment and in combination with other treatments. Activities include grapple piling, mastication, and chipping. Grapple piling typically involves a tracked excavator that piles dead and down material, live brush, and live trees less than three inches DBH. Material resulting from fuels treatments may be removed, piled and burned, lopped and scattered, or masticated. Trailer mounted chippers would be used at landings to chip and remove the material. In areas where vegetation removal is not feasible due to accessibility or site sensitivity, a masticator or self-propelled chipper may be used to shred or grind vegetation and leave on the site.

Hand Thinning (1,469 acres)

Generally, hand thinning involves the use of chainsaws to cut trees up to 10 inches DBH but may cut larger trees to meet project objectives, particularly in aspen stands and meadows. Cut trees could be piled for burning at a later time, bucked for firewood, chipped and removed, or lopped and scattered.

Aspen Stand Improvements

Specific prescriptions within the proposed treatment units (e.g., mechanical thinning) designed to improve aspen stands include conifer removal and prescribed fire. All conifers could be removed from within aspen stands, including trees greater than 30 inches DBH. Some conifers could be left standing as snags or be felled and left as downed wood to create wildlife habitat. Conifers up to 150 feet around aspen stands may also be removed. Approximately 1,382 acres of aspen stands within the above vegetation treatment units have been identified for improvement but more may be identified during implementation planning. A maximum of 2,000 acres would be treated for aspen improvement. Aspen stands within identified treatment units (e.g., mechanical thinning) exhibiting degraded condition could be selected for treatment. Prescribed fire would be intended as a secondary treatment in

aspen stands following conifer removal.

Meadow Improvement

Within meadows, all conifer trees, including trees greater than 30 inches DBH, could be removed utilizing mechanical thinning, hand thinning, or prescribed fire. Where mechanical treatment is not feasible, trees would be hand-thinned and removed, lopped and scattered, and/or piled in the meadow. Piled material resulting from treatments would be burned. Prescribed fire within meadows would be considered as a primary and/or secondary treatment to reduce conifer regeneration, promote herbaceous vegetation, and reduce fuels. Meadow boundary delineators may include vegetation and soil composition, topography, changes in landform, or changes in soil moisture.

Approximately 621 acres of meadows within the above vegetation treatment units have been identified for improvement but more may be identified during the implementation planning process. A maximum of 1,000 acres would be treated for meadow improvement. Meadows in units that will use prescribed fire as the primary treatment are not included in the maximum acreage. Currently 3,994 acres of meadow habitat within the large meadow complexes of Queen Valley and Red clover valley are planned for prescribed fire only treatments.

Spring Improvement

Specific prescriptions within the proposed treatment units (e.g., mechanical thinning) will remove conifers to improve water availability and increase surface flows of special aquatic features such as springs. All conifers less than 30 inches DBH may be removed from within 100 feet of special aquatic features such as springs. Trees greater than 30 inches DBH may be removed in limited circumstances where needed to meet improvement objectives. Hand-thinning would be utilized where mechanical treatment is not feasible, and material would be piled and burned, bucked for firewood, left as downed wood, or lopped and scattered. Approximately 191 acres of spring features within the above vegetation treatment units have been identified for improvement but more may be identified during the implementation planning process. A maximum of 300 acres would be treated for spring improvement.

Prescribed Fire

Prescribed fire would be used as a stand-alone treatment on approximately 3,994 acres of primarily meadow habitat where it can be safely applied to achieve ecological and cultural benefits. Prescribed fire would also be used as a follow-up treatment to burn existing surface fuels, small diameter conifer trees, piles created by mechanical fuels and/or hand treatments, and slash created by thinning treatments. Prescribed fire as a follow-up treatment could occur on up to 44,717 acres. Due to logistical constraints, it is likely that many units will not receive prescribed fire following other treatments, however, there is the potential to burn these units if the opportunity arises. Prescribed fire would be planned to be low to moderate intensity. Burn plans would be developed to identify consumption goals, acceptable levels of tree mortality, large tree and snag protection, and large debris retention. Areas may receive hand thinning pretreatments to meet burn plan goals. Existing roads and natural barriers would be utilized as fire lines to minimize new ground disturbance although additional improvements or fire line construction around the burn area perimeter may be necessary. All constructed fire lines would be rehabilitated after implementation following the Region 5 Best Management Practices and resource protection measures. Prescribed fire and pile burning would occur over multiple years, depending on fuel and weather conditions.

Road Improvements and Obliteration

The project proposes to repair, maintain, and/or reconstruct National Forest System Roads that are contributing to watershed impacts. Action would be taken to improve road drainage, reduce erosion caused by concentrated road runoff, and reduce sedimentation from roads into the stream network. Road treatments would be prioritized in areas with insufficient drainage, issues with water crossings, and roads contributing direct sedimentation to waterways.

Reconstruction would involve the widening of curves, excavating and/or placing fill material to reshape the roadbed so that runoff is less concentrated. Road dips with rock armored outlets may be installed to better disperse runoff from road surfaces. Construction of armored overflow dips at certain culverts would ensure that if the culvert is plugged, stream diversion along the road would be minimal. Additional improvements may include out-sloping road segments, constructing low water crossings, installation of rip-rap aprons on fill slopes, and replacing culverts.

Road maintenance may consist of installation of road dips to better disperse runoff from road surfaces, brushing, blading the road surface, and improving drainage.

Approximately 42 miles of routes not added to the National Forest System (NFS) transportation network within the project area are proposed for obliteration. Obliteration may involve recontouring, subsoiling or abandonment. Abandonment is appropriate where the road has become completely overgrown with vegetation. Obliteration may also involve removing drainage structures, restoring vegetative cover, blocking access, or some combination of these treatments. Obliterating roads would promote vegetative recovery, decrease compaction, increase infiltration into the roadbed, increase soil stability and reduce erosion.

IV. STATUS OF THE SPECIES AND HABITAT IN THE ACTION AREA

Sierra Nevada Yellow-Legged Frog (*Rana sierrae*)

Habitat and Life History

Distribution-wide species account (life history and spatial ecology) for the Sierra Nevada yellow-legged frog was provided in the Federal Register and the USDA Forest Service Biological Assessment for the Programmatic Consultation between the Pacific Southwest Region and the Fish and Wildlife Service (79 FR 24255; FF08ESMF00-2014-F-0557: Programmatic BA, June 16, 2014), and incorporated herein by reference.

Critical Habitat

On August 26, 2016, the U.S. Fish and Wildlife Service finalized designation of critical habitat for the Sierra Nevada yellow-legged frog (81 FR 59045). No designated Critical Habitat overlaps with the action area.

Threats/Management Concerns

Risk factors and management concerns were thoroughly reviewed in the Federal Register and the USDA Forest Service Biological Assessment for the Programmatic Consultation between the Pacific Southwest Region and the Fish and Wildlife Service (79 FR 24255; FF08ESMF00-2014-F-0557: Programmatic BA, Pages 31-37, June 16, 2014), and are incorporated by reference herein.

Project Surveys and Population Status

Approximately 10,575 acres of suitable Sierra Nevada yellow-legged frog (SNYLF) habitat occurs within the Mapes action area (Figure 2). There is no Critical Habitat within the project area, and there are no known records of *Rana sierrae* in the project area.

Occupancy of SNYLF in the action area is unknown. Surveys have been conducted over approximately 261 miles (84%) of stream habitat in the project area, including 152 miles (49%) of stream habitat surveyed during project-specific surveys in 2019-2020. No SNYLF were detected as a result of project-specific surveys, nor were SNYLF detected during historic surveys conducted in the action area between 2000-2012 (USDA Forest Service NRIS AqS, Natural Resource Manager, accessed November 02, 2020). There were no survey records for Lake Davis located in the NRIS AqS database, however there are no known occurrences of SNYLF in the lake which is currently stocked with trout by the California Department of Fish and Wildlife and heavily visited for recreation.

While SNYLF occupancy is unknown, due to the lack of historic records in the project action area, it is thought that *R. sierrae* may not occupy the project area. Many of the perennial streams in the project area contain both fish (trout) and aquatic invasive species (signal crayfish and bullfrogs). Many of the intermittent streams do not contain perennial aquatic habitat (pools) and are dry for much of the year.

Lone Rock Creek represents the nearest extant *Rana sierrae* population to the project area, 4.2 linear miles (5 stream-miles) from the Mapes Project action area (**Error! Reference source not found.**). A small portion of suitable SNYLF habitat (4 stream miles, 86 acres) within the action area is hydrologically connected to the Boulder/Lone Rock Creeks Critical Habitat Unit in the Antelope Creek subwatershed, approximately 0.21 stream miles (3 acres) of which overlaps with project activities (Figure 3). The suitable habitat within the Mapes Project action area that is hydrologically connected to the Boulder/Lone Rock Creeks Critical Habitat Unit is separated from the extant population of SNYLF in Lone Rock creek by Antelope Lake, which is currently stocked with trout by the California Department of Fish and Wildlife. The Lone Rock SNYLF population is regularly monitored by the Forest Service and there are no records of SNYLF within Antelope Lake.

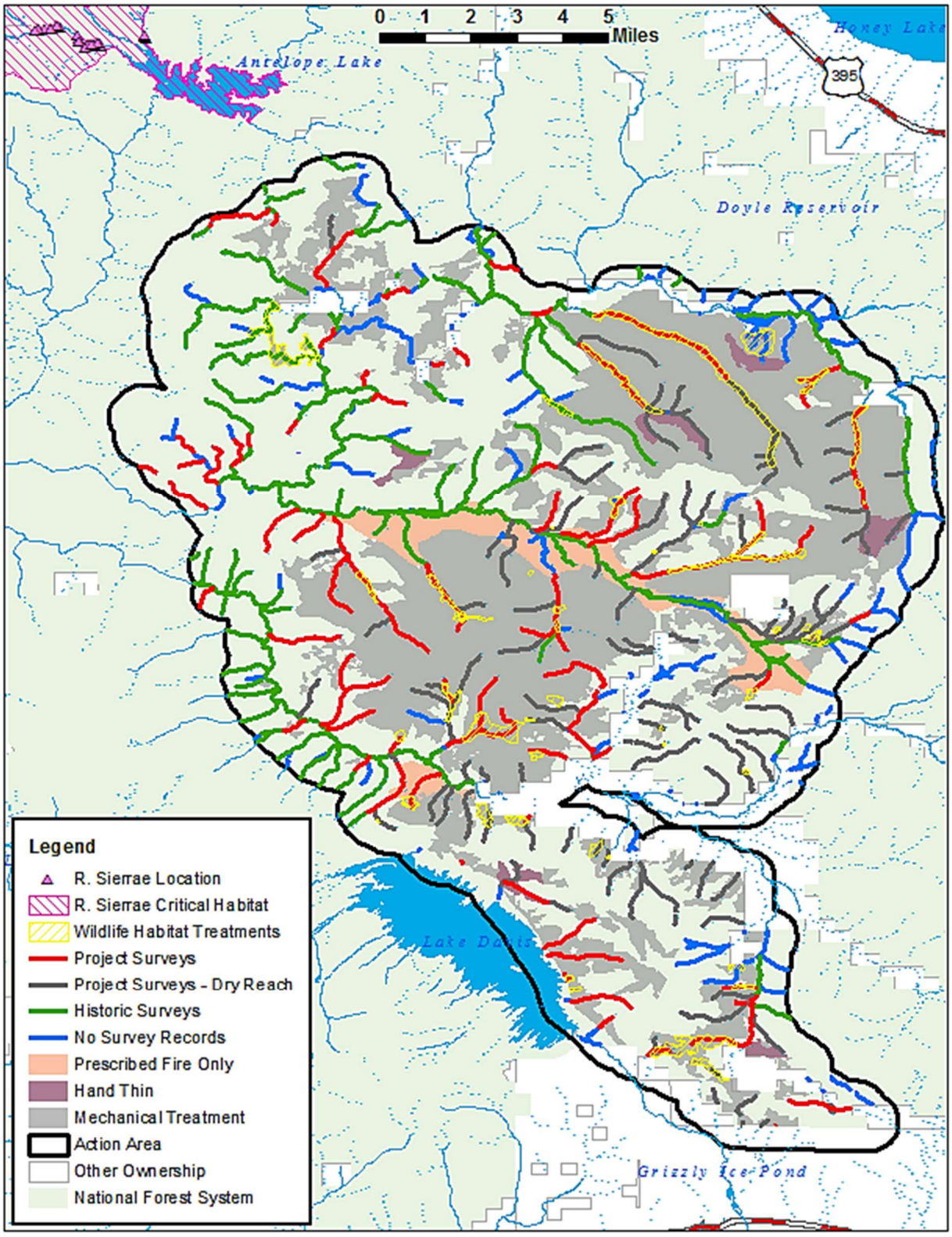

Figure 2. Survey coverage of suitable Sierra Nevada yellow-legged frog habitat within the Mapes action area and proximity to nearest known Critical Habitat. Wildlife habitat treatments include aspen, meadow, and spring improvement.

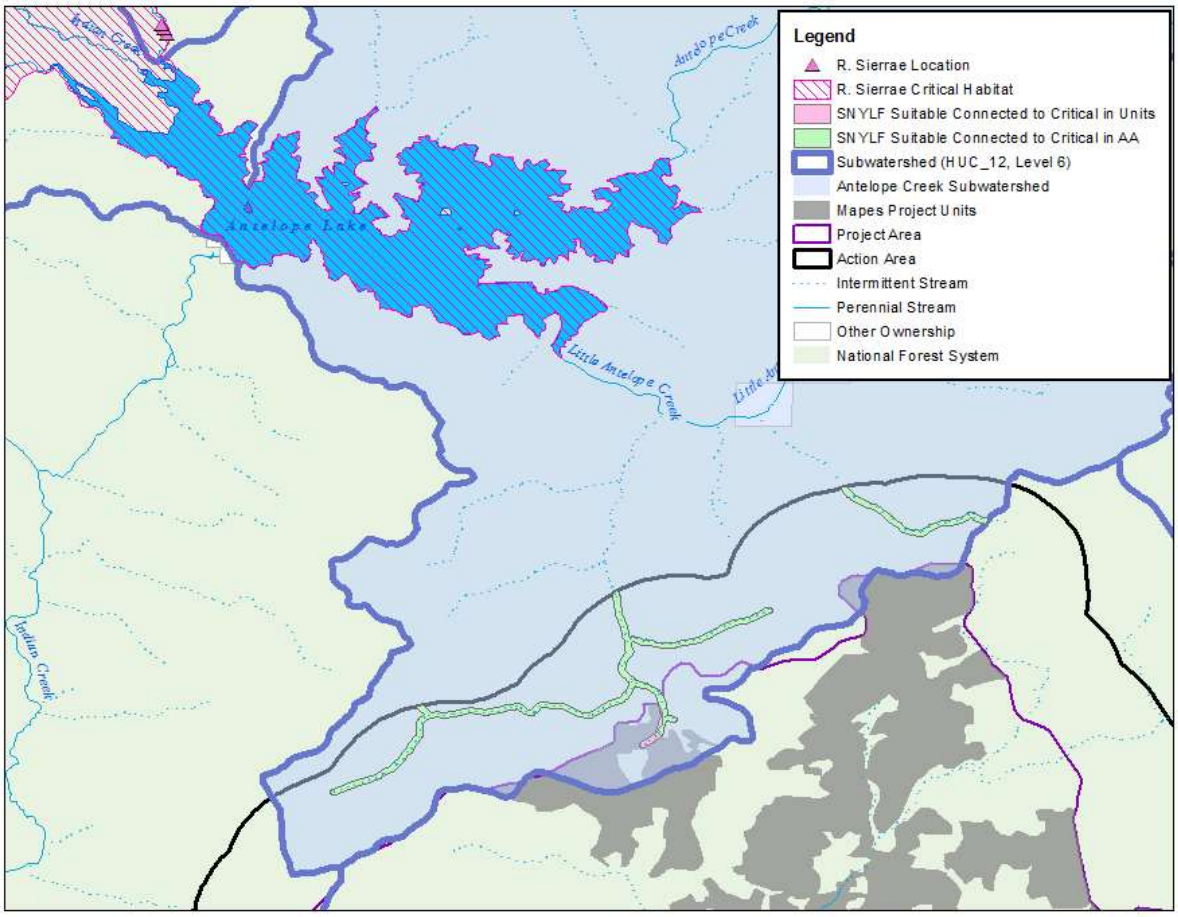

Figure 3. Suitable SNYLF habitat within the Mapes Project Action Area (AA) that is hydrologically connected to designated Critical Habitat.

IV. ENVIRONMENTAL CONSEQUENCES AND CUMMULATIVE EFFECTS

Sierra Nevada Yellow-Legged Frog (*Rana sierrae*)

Direct and Indirect Effects of the Proposed Action

Approximately 3,463 acres (33%) of suitable SNYLF habitat within the Action Area overlaps with proposed treatment units (Table 2).

Individuals may be directly or indirectly impacted by project activities if SNYLF should occupy the action area during implementation, and suitable habitat will experience short- to mid-term disturbance (<20 years) post implementation. There are potential long-term benefits to suitable habitat as a result of wildlife habitat improvement treatments, road decommissioning, and road maintenance, as well as if proposed fuels and forest health treatments should reduce the risk of future high severity wildfire passing through this landscape.

The direct effects of the proposed actions on *R. sierrae* and their habitat would be limited to the Project's

implementation phase. Indirect effects could last well-beyond the implementation period. The exact duration of indirect effects would depend on the timescale in which the proposed activities are implemented. This analysis relies on the implementation of protective measures that are expected to substantially minimize the chance of negative effects to suitable habitat and individual SNYLF, should they occur within the action area.

Potential effects include harm, harassment, injury, and death of egg masses, tadpoles, subadults, and adults due to project associated activities. Project activities may cause noise, vibration, dust, and other disturbances that result in the avoidance or abandonment of breeding, resting, movement, or foraging habitat. Direct mortality could occur due to crushing or burning. Potential habitat alterations include changes to canopy and other vegetative and non-vegetative cover, woody debris, air and water microclimates, water quantity and quality, sedimentation, and channel scour.

Implementation of best management practices (BMPs), standards and guidelines (S&Gs), and project-specific design criteria (Table 3) are expected to minimize negative impacts to individual SNYLFs and suitable habitat.

Mechanical thinning, hand thinning, grapple piling, mastication

Injury or mortality of SNYLF could occur due to crushing from heavy machinery or falling trees during vegetation management activities. Disturbance of SNYLF could occur due to increased noise and human presence, which could disrupt breeding or foraging activities. Project activities could cause short-term increased sedimentation and decreased water quality. Decreased canopy cover as a result of thinning could cause changes in air and water microclimates.

Where surveys are complete and habitat is determined to be "unutilized" as defined in the Programmatic BO (USFWS 2014b), mechanical equipment may be allowed to enter suitable habitat, which could result in short-term increases in sedimentation due to soil disturbance. Modified equipment exclusion buffers on aquatic habitat would be 50 feet for general forest treatments and 25 feet for wildlife habitat improvement treatments. The reduced buffer would result in increased short-term effects to suitable SNYLF habitat, but could have long term benefits. Reduced buffers for general forest treatments could have long-term beneficial effects to SNYLF habitat if treatments result in reduced risk of high severity fire, which can negatively impact SNYLF habitat through increased run-off and sedimentation post-fire. Wildlife habitat improvement treatments in aspen, meadows, and around springs are expected to have long-term beneficial effects to SNYLF habitat, including improved basking habitat due to decreased canopy cover, and potentially increased water availability due to the removal of encroaching conifers. To-date approximately 390 acres of aspen enhancement, 162 acres of meadow improvement, and 49 acres of spring improvement within suitable SNYLF habitat have been identified for treatment. Additional aspen, meadow, and spring improvement treatments may be identified within planned treatment units (e.g., mechanical thinning) during implementation.

Prescribed Fire

Direct effects due to prescribed fire include the killing or injuring of individuals due to burning. Indirect effects include changes in the microclimate (reduced humidity, and increased air temperatures) due to loss of riparian vegetation, loss of sheltering habitat due to consumption of woody debris, and increased sedimentation to the stream channel due to increased overland flows.

There is a small potential for the modification of streamside vegetation and loss of duff layer due to prescribed fire in riparian areas. However, any impacts from prescribed fires are expected to be short lived. Fire intensity should be low enough to allow some retention of duff layer and riparian vegetation that would prevent soil erosion and

expedite recovery. Prescribed fire activities would occur under weather conditions that would result in low to moderate fire severity, which should allow for retention of larger diameter woody debris that can be utilized by SNYLF for sheltering cover. With the implementation of project design features and BMPs, the effects of prescribed burning would be negligible.

Reducing Transportation System Impacts

Direct effects include mortality due to crushing or drafting during road construction, removal, or maintenance activities. Indirect effects include changes to water quality due to sedimentation and disturbance due to increased noise, dust, and vibration.

Temporary road construction would increase the potential for soil movement and increase potential sedimentation into streams and aquatic habitats. Road obliterations would decrease compaction, increase percolation into the roadbed, increase soil stability and limit concentrated flow as well as surface erosion derived from temporary and non-system roads.

The use of water for dust abatement by drafting water from creeks particularly during the summer months may cause changes in the flow regimes and water quality, especially within deeper pools and off channel waterholes. Changes in flow regimes can result in changes in surface water elevations, exposing egg masses to air drying for short periods (early summer) to potentially longer periods of exposure later in the summer, resulting in loss of egg viability. There is also the potential for individual tadpoles, egg masses, or amphibians to be taken up by the drafting process, resulting in mortality of individuals.

Road work at stream crossings for culvert repair and cleaning would allow heavy equipment within suitable habitat. A limited number of intermittent stream crossings may be allowed, subject to approval by both the District Biologist and District Hydrologist and will follow the conservation measures listed below.

Potential transportation management impacts to SNYLF suitable habitat (e.g., increased sediment delivery to aquatic features) will be temporally punctuated, and road decommissioning will be spatially restricted with beneficial effects to SNYLF habitat in the short- (<5 years) and long-term.

Table 2. Acres of suitable habitat within the Mapes Project and each treatment type.

Project Designation	Total Acres	Acres SNYLF Suitable Habitat**
Mapes Project Action Area	113,260	10,575
Mechanical thin with follow-up underburn	29,250	1,578
*Identified for wildlife habitat improvement treatment**	*1,523*	*385*
Mechanical fuels with follow-up underburn	10,006	378
*Identified for wildlife habitat improvement treatment**	*518*	*151*
Hand thin with follow-up underburn	1,482	195
*Identified for wildlife habitat improvement treatment**	*139*	*63*
Prescribed Fire Only	3,994	1,312
*Identified for wildlife habitat improvement treatment**	*10*	*3*
Total Acres Affected (Action Area):	44,682	3,4623
*Identified for wildlife habitat improvement treatment**	*2,190*	*601*

*Wildlife habitat improvement treatments are identified within other treatment types and are not included as additional acres in total estimates. Treatments include aspen, meadow, and spring improvement.

**Mechanical equipment would be excluded from suitable SNYLF habitat except in unutilized habitat.

Conservation Measures

In addition to ensuring that the Project's proposed actions are executed in compliance with the Sierra Nevada Forest Plan (USDA 2004a, 2004b), proposed activities will be implemented using all pertinent standards and guidelines (S&Gs), best management practices (BMPs), project-specific design criteria (**Error! Reference source not found.**), and terms and conditions outlined in the USFWS Programmatic Biological Opinion (USFWS 2014b).

Mechanical (heavy) equipment will be excluded from SNYLF suitable habitat except where surveys determine suitable habitat is unutilized. In areas where suitable habitat is determined to be unutilized, equipment exclusion zone buffers for perennial and intermittent streams and special aquatic features will be 50 feet for general forest treatments and 25 feet for wildlife habitat treatments such as aspen, meadow, and spring improvement. The reduced equipment exclusion zone is designed to protect water quality and aquatic habitat features while allowing treatments to be more effective, especially those that meet Riparian Conservation Objectives as defined in the Sierra Nevada Forest Plan (USDA 2004a, 2004b). Activities within suitable habitat would only be allowable after pre-implementation surveys are complete and find the habitat "unutilized" as defined in the Programmatic BO. Within the portion of the Project that overlaps with the Walker Fire footprint, no mechanical equipment would be allowed within suitable SNYLF habitat regardless of survey coverage, except for a very limited number of stream crossings.

A very limited number of intermittent stream crossings will be allowed where surveys determine habitat is unutilized, subject to approval by both the District Biologist and District Hydrologist. No crossings of perennial streams will be constructed. Landings will be located outside of suitable habitat, except in limited circumstances, as approved by the District Biologist and District Hydrologist, where using an existing landing within unutilized suitable habitat would be less impactful than constructing a new landing.

Prescribed fires will be lit outside SNYLF suitable habitat and allowed to back into suitable habitat if conditions allow. If dry conditions exist in meadow habitat, active ignitions will be at least 82 feet from aquatic habitat. Burning of piled material will be restricted to outside 82 feet from aquatic habitat. In areas where surveys are complete and find the habitat "unutilized" as defined in the Programmatic BO, a smaller buffer of 25 feet from aquatic habitat would apply for active ignitions and burning of piled material.

Within the area hydrologically connected to Critical Habitat, surveys will be completed protocol (three surveys, including one in a water year where snowpack is 80 percent or greater than normal for the area), and will include at least one survey prior to but in the same calendar year implementation commences. Additionally, this area is within the Walker Fire footprint, so no mechanical vegetation treatments would occur within suitable habitat that is hydrologically connected to Critical Habitat.

If future surveys find the Lone Rock population is expanding into Antelope Lake or SNYLF are detected near the southeastern portion of the Lake, effects to SNYLF will be reevaluated and consultation with USFWS will be reinitiated if appropriate.

Table 3. Mapes Project Design Criteria Specific to Sierra Nevada yellow-legged Frogs

Activity	Suitable Habitat, Occupied or Unknown Occupancy	Suitable Habitat, Unoccupied*
All	All suitable habitat which overlaps with project activities will have at least one survey prior to commencement of operations. All suitable habitat within the Action Area that is hydrologically connected to Critical Habitat will be surveyed to protocol (three surveys, including one in a water year where snowpack is 80 percent or greater than normal for the area), and will include at least one survey prior to but in the same calendar year implementation commences.	
Heavy Equipment including harvest equipment, road building equipment, mastication equipment, etc.	No mechanical equipment within suitable habitat, including within 82 feet of intermittent or perennial streams. In-stream work such as culvert replacement would occur after surveys confirm there are no frogs within 0.25 mile of proposed activities, or dry soil conditions exist. In the event a Sierra Nevada yellow-legged frog is detected in the vicinity of in-stream work, the frog would be relocated to a safe place to prevent mortality after approval from USFWS. Stream crossings are subject to approval by the District Biologist and District Hydrologist, and no stream crossings allowed within 0.25 miles of occupied sites.	No mechanical equipment within 50 feet of intermittent or perennial streams or special aquatic features for general forest treatments. No mechanical equipment within 25 feet of intermittent or perennial streams or special aquatic features for wildlife habitat improvement treatments (aspen, meadows, springs). Exceptions to these buffers are for project activities on existing roads and a limited number of stream crossings. Activities within suitable habitat are subject to approval by the District Biologist and District Hydrologist. No mechanical equipment will be allowed within suitable habitat in the Walker Fire footprint. Within areas of suitable habitat where heavy equipment use would occur, Sierra Nevada yellow-legged frog habitat occupancy will be assessed through surveys as defined in the Programmatic Biological Opinion, and will include at least one survey prior to but in the same calendar year implementation commences.
Prescribed fire and pile burning	No prescribed fire or pile burning within suitable habitat, including within 82' of aquatic habitat or wet meadow conditions.	No active ignition within 25 feet of aquatic features or wet meadow conditions. Piles to be burned will be built outside of a 25-foot riparian buffer on intermittent and perennial streams.
Fueling of gas-powered equipment, all sizes	Will follow best management practices (BMPs) and standards and guidelines (S&Gs). Will not occur within 500 feet of sites occupied by *R. sierrae.*	Will follow best management practices (BMPs) and standards and guidelines (S&Gs).

Environmental Baseline and Cumulative Effects

The existing condition reflects changes on the landscape from all activities that have occurred in the past, and analysis of cumulative effects of the proposed action evaluates the impact of the project on the existing condition within the analysis area. Cumulative effects include the effects of future Federal, State, Tribal, local or private actions that are reasonably certain to occur in the action area. Cumulative effects to SNYLF could occur with the potential incremental loss of quantity and/or quality of habitat.

The Mapes Project has been impacted by the Walker Fire that burned in 2019. The action area for the Mapes Project overlaps with the action areas for two projects which overlap with each other as well: the "Walker Fire Rehabilitation Project" which proposes salvage logging and planting activities, and the "2020 Plumas National Forest

Road and Trail Maintenance Project" which proposed hazard tree removal and road and trail maintenance activities. However, the actions are not connected. The action area of the Mapes Project area spatially overlaps with 25,975 acres of the Walker Fire Rehabilitation Project area and 27,388 acres of the 2020 Plumas National Forest Road and Trail Maintenance Project area. There is no overlap of treatments with the Walker Fire Rehabilitation Project, however, 381 acres of treatments identified in the 2020 Plumas National Forest Road and Trail Maintenance Project overlap with treatment units in the Mapes Project. Overlap of treatment occurs primarily with mechanical thinning units for the Mapes Project and consists of abatement of hazard trees (309 acres), mastication (64 acres) and road maintenance (8 acres) under the Road and Trail Maintenance Project. The cumulative environmental effect of the proposed salvage treatments will be reduced fuels, reduced vegetation cover and short-term increased sedimentation to streams. To reduce cumulative impacts to water quality, including increased sedimentation, no mechanical equipment would be allowed within 82 feet of perennial and intermittent streams within the Walker Fire footprint in the Mapes Project, regardless of if surveys determine the habitat to be unutilized by SNYLF. Planned road and trail maintenance activities may provide long-term benefits by reducing chronic sedimentation issues from road surface erosion and culvert failures.

The fuelwood gathering and Christmas tree cutting programs on the PNF are ongoing programs that have been in existence for years and are expected to continue. The past and future effect of these actions has and would be to remove habitat structure, while generally retaining continuous forest cover which would have no effect on the SNYLFs. Range allotments (5,273 acres) overlap the action area, and 2,269 acres of treatment units fall within these range allotments. The PNF completed consultation on these range allotments with Fish and Wildlife Service regarding the SNYLF, and it is doubtful that any additive impacts of range activities and those proposed in the Mapes Project will significantly impact SNYLF. Recreation will continue in the action area and surrounding landscape.

It is possible that non-federal actions could occur on private lands within the project action area that may add to the Project's effects on the suitable habitat of *R. sierrae*. There are 1,421 acres of non-Forest Service land within the Mapes Project perimeter.

IV. CONCLUSIONS - DETERMINATIONS

Sierra Nevada Yellow-Legged Frog (Rana sierrae)

The Mapes Project **May Affect but is Not Likely to Adversely Affect** *Rana sierrae*. With the implementation of all conservation measures, direct and indirect impacts to the species would be negligible. Short term negative impacts to unoccupied habitat could occur due to implementation of project activities within suitable habitat, but there would likely be long term beneficial effects to suitable habitat as a result of wildlife habitat improvement treatments. Further, proposed transportation system management will improve watershed condition and thinning forests to reduce fuels and disease threats will reduce the risk of future high severity wildfire passing through the action area.

Critical Habitat Determination

The Mapes Project does not overlap and therefore will have **No Effect** on designated critical habitat.

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